U.S. Serial No.: 09/305,738 Docket No.: 2324-7028US1

IN THE CLAIMS

For the Examiner's convenience, this Amendment includes the text of all claims under examination.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims

Listing of Claims:

Claims 1-26 (Canceled).

Claim 27. (Previously presented): An artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns.

Claim 28. (Previously presented): The artificial antibody according to claim 27, wherein said particle size is between about 10 nm and 100 nm.

Claim 29. (Previously presented): The artificial antibody according to claim 27, wherein said specific binding sites are specific for a drug molecule.

Claim 30. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is theophylline.

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Claim 31. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is a benzodiazepine drug.

Claim 32. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule is diazepam.

Claim 33. (Previously presented): The artificial antibody according to claim 29, wherein said drug molecule has a narrow therapeutic index.

Claim 34-35 (Canceled)

Claim 36. (Previously presented): The artificial antibody according to claim 27, wherein said particle size is between about 10 nm and 1000 nm.

Claims 37-53. (Canceled)

Claim 54. (Currently amended): The method according to claim ~~53~~ 88, wherein said label comprises at least a radioligand, an enzyme, biotin, a steroid, or a fluorochrome~~, or a metal~~.

Claim 55. (Currently amended): The method according to claim ~~54~~ 88, wherein ~~said~~ a label of said labeled organic molecule is ~~metal~~ is gold.

Claim 56. (Currently amended): The method according to claim ~~53~~ 88, wherein ~~said~~ a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claim 57. (Canceled)

Claim 58. (Currently amended): A method of therapy, comprising:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site ~~having~~ with specificity for a target ~~an imprinted molecule~~, wherein said artificial antibody has a particle size of less than about five microns;~~,~~

binding a drug molecule to said artificial antibody; and

administering said artificial antibody to a mammal body, in which said artificial antibody carries said drug molecule to said target.

Claim 59. (Previously presented): The method according to claim 58, wherein said administering is into the bloodstream of said mammal.

Claims 60-64 (Canceled)

Claim 65. (Currently amended): The method according to any one of claims ~~60-64~~ 58, 59 and 66, ~~having~~ in which said target is ~~being~~ a cancer cell.

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Claim 66. (Currently amended): The method according to claim ~~64~~ 58, further comprising the step of:

said drug molecule therapeutically affecting said ~~having a therapeutic effect on~~ ~~said~~ target by the interaction of said drug molecule with said target.

Claim 67. (Canceled)

Claim 68. (Currently amended): The method according to claim ~~58~~ 65, further comprising the step of assembling a plurality of said artificial antibody around a cancer cell.

Claims 69-71 (Canceled)

Claim 72. (Previously presented): The artificial antibody according to claim 27, wherein said molecular imprint polymerization at least reacts a methacrylic acid molecule with an ethylene glycol dimethacrylate molecule.

Claim 73. (Previously presented): The artificial antibody according to claim 27, wherein said molecular imprint polymerization reacts at least one molecule of itaconic acid, vinylpyridine, vinylimidazole, or alkylated hydrophobic monomer.

Claim 74. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for at least a nucleic acid or a nucleotide.

Claim 75. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a metabolite.

Claim 76. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a toxin.

Claim 77. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a prostaglandin molecule.

Claim 78. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for a hormone.

Claim 79. (Previously presented): The artificial antibody according to claim 27, wherein said binding site is specific for an opiate molecule.

Claims 80-84 (Canceled)

Claim 85. (Currently amended): A method of purification, comprising:

providing an extra-corporal device containing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns,

drawing a bodily fluid having said imprinted molecule from a patient,

passing said bodily fluid through said device, and

binding said imprinted molecule to said artificial antibody to form a bound imprinted molecule,

removing said bound imprinted molecule from said bodily fluid,

thereby producing a purified bodily fluid.

Claim 86. (Previously presented): The method of purification according to claim 85, further comprising the step of:

returning said bodily fluid to said patient after said passing said bodily fluid through said device.

Claim 87. (Canceled).

Claim 88. (Currently amended): A method for determining the amount of ~~assaying a drug~~ an organic molecule in a fluid, comprising the steps of:

~~providing~~ obtaining a fluid sample having ~~with a drug~~ an organic molecule,

adding a known amount of a labeled ~~drug~~ organic molecule to said sample,

contacting said sample with an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for said ~~drug~~ organic molecule, wherein said artificial antibody has a particle size of less than about five microns,

binding said ~~drug~~ organic molecule with said artificial antibody so that said ~~drug~~ organic molecule and said labeled ~~drug~~ organic molecule in said sample competitively bind with said artificial antibody ~~antibodies~~; and

determining the amount of said labeled ~~drug~~ organic molecule unbound in said sample or bound to said artificial antibody so as to determine the amount of said ~~drug~~ organic molecule in said fluid.

Claim 89. (Previously presented): The method according to claim 88, in which said particle ~~wherein artificial antibody~~ size is between about 10 nm and 100 nm.

Claim 90. (Previously presented): The method according to claim 88, in which said particle ~~wherein artificial antibody~~ size is between about 10 nm and 1000 nm.

Claim 91. (Canceled).

Claim 92. (New): The method according to claim 89, in which a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claim 93. (New): The method according to claim 90, in which a label of said labeled organic molecule comprises at least an electrochemiluminescent compound.

Claim 94. (New): A method of therapy, comprising:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for a target for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns, and

withdrawing said target from said mammal body through the specific binding between the target and the artificial antibody.

Claim 95. (New): The method of therapy according to claim 94, further comprising the steps of:

administering said artificial antibody to a bodily fluid of a patient,

removing said bodily fluid having said artificial antibody from said patient, and

returning said bodily fluid to said patient after said withdrawing step.

Claim 96. (New): A method of therapy, comprising:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization for a target and having a binding site with specificity for said target, wherein said artificial antibody has a particle size less than about five microns, and

treating a patient having a bodily fluid having said target by providing said artificial antibody to said bodily fluid and specifically binding the target and said artificial antibody forming a bound target,

withdrawing said bound target from said bodily fluid of said mammal body having said target.

Claim 97. (New): A method of therapy according to claim 96, further comprising the step of:

administering said artificial antibody to the body of a patient.

Claim 98. (New): A method of therapy according to claim 96, further comprising the steps of:

removing said bodily fluid having said target from a patient,

conducting said specifically binding in an extra-corporal device containing said artificial antibody.

Claim 99. (New): A method of therapy according to claim 98, further comprising the step of:

returning said bodily fluid to said patient after said withdrawing said bound target.

Claim 100. (New): The method according to either claim 85 or 86, in which said imprinted molecule is a toxin.

Claim 101. (New): The method according to either claim 85 or 86, in which a cancer cell comprises said imprinted molecule.

Claim 102. (New): A method of purification, comprising:

providing an extra-corporal device containing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site

having specificity for an target, wherein said artificial antibody has a particle size of less than about five microns,

drawing a bodily fluid having said target from a patient,

passing said bodily fluid through said device, and

binding said target to said artificial antibody to form a bound target,

removing said bound target from said bodily fluid,

thereby producing a purified bodily fluid.

Claim 103. (New) The method of purification according to claim 102, further comprising the step of:

returning said bodily fluid to said patient after said passing said bodily fluid through said device.

Claim 104. (New) The method of purification according to either claim 102 or 103, in which said target is a cancer cell.

Claim 105. (New): The method according to claim 88, in which said organic molecule is drug molecule.

Claim 106. (New): The method according to claim 88, in which said organic molecule is a metabolite.

Claim 107. (New): The method according to claim 88, in which said organic molecule is a nucleotide.

Claim 108. (New): The method according to claim 88, in which said organic molecule is a nucleic acid.

Claim 109. (New): The method according to claim 88, in which said organic molecule is a carbohydrate.

Claim 110. (New): The method according to any one of claims 88, 89 and 90, in which said organic molecule is a protein.

Claim 111. (New): The method according to any one of claims 88, 89 and 90, in which said organic molecule is a hormone.

Claim 112. (New): The method according any one of claims 88, 89 and 90, in which said organic molecule is a toxin.

Claim 113. (New): The method according to claim 88, in which said organic molecule is a prostaglandin.

Claim 114. (New): The method according to claim 88, in which said organic molecule is a leukotriene.